fortunate that workers have delved intensely into Hispaniola's butterfly fauna at the same time virgin habitats were being destroyed. Schwartz's detailed comments on this wanton destruction are timely and the situation appears to have worsened exponentially since his writing. Thus, many of the areas described by Schwartz as "excellent opportunities for further research" (p. 506) may soon be gone. One important example, mesic forest at Las Abejas in the Sierra de Baoruco (type locality of seven recently described butterflies, pp. 498–500) appears to have lost its entire upland canopy since 1988.

The taxonomic section of *The Butterflies of Hispaniola* is well designed. Clearly rendered distribution maps appear next to each taxonomic entry and the text focuses on the occurrence and habits of each species. For many species, such field notes constitute the first published accounts. A drawback in the distributional data presented is that it is limited to the collections of Schwartz, his immediate colleagues, and selected specimens at some museums. The "upside" of this is accuracy of data and related commentary. A "downside," however, is that large numbers of specimens collected by other workers are omitted and prejudice some distributional accounts. The black dots only represent specimens in Schwartz's personal collection (with supplementary open dots added only if these records are unique). Lepidopterists who have collected on Hispaniola may find these instances irksome. However, owing to the breadth of sampling by Schwartz and his field associates, distortion does not appear severe and one must respect the clear, first-hand field data.

To understand the importance of this book one has only to ask what the statistics on Hispaniola's butterfly fauna would be without the recent work of Schwartz and his colleagues. It is sad, however, that the book has appeared at a time when other interested entomologists may have to ask how much remains of the many exciting locales and habitats Schwartz describes. Entomologists with any serious interest in the Antillean fauna will want a copy of this book.—*Kurt Johnson, Department of Entomology, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024; David Matusik, Department of Entomology, Field Museum of Natural History, Roosevelt Road at Lake Shore Drive, Chicago, Illinois 60076.*

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A NEW NATURAL HISTORY DICTIONARY

J. New York Entomol. Soc. 98(1):126–128, 1990

The Cambridge Illustrated Dictionary of Natural History.—R. J. Lincoln and G. A. Boxshall. 1987. Cambridge University Press, New Rochelle, New York. 413 pp. Price not supplied.

To produce a dictionary is a daunting task. For natural history, in particular, one must distill the most important aspects of ecology, behavior, and taxonomy of approximately 1.5 million organisms into a readable, concise, and affordable volume. In some respects, this book is a success, in other respects there are simply too many errors to take all the entries very seriously. Granted, it is difficult to be entirely accurate in such diverse subjects as comparative zoology and meteorology, which is why, when perusing this book, I had to concentrate on the subject I know best, the insects. But, if the insect entries are any indication, do not use this book as an ultimate reference (say, for spelling or the basic facts). It does appear useful as a handy desktop book for a quick, preliminary definition of some taxonomic group or structure with which one might not be at all familiar.

To begin, for a book entitled the *Illustrated* dictionary . . . one would think that some effort would have been put into the illustrations. The whitefly on pg. 11 is simply 2 wings, 2 pairs of legs, a head, and a pair of antennae. For almost all of the insect drawings, the wing veins are simply sketched in, with no regard to proper venation (e.g., the honey bee, biting midge, glossinid, skipper, ichneumon, scorpion fly, and housefly—the may fly is actually pretty good). The caterpillar (pg. 68) could just as well be a sawfly larva, and the looper (pg. 217) and praying mantis (pg. 225) are rather entertaining. On pg. 6, the "carabid beetle" that is figured is actually an elaterid (click beetle). Under the definition of "Insecta," there is the illustration of an ephemeropteran with the legend "caddis fly": this mistake is not a difference in British and American vernacular, for under the "caddisfly" entry it is defined as Trichoptera (the British vernacular does pop up several times, such as "daddylong-legs" [=Tipulidae to the British; the Opiliones to Americans]; "naiad" is defined under "Unionoida" [freshwater molluscs], but it is also the vernacular [to Americans] for some kinds of freshwater insect nymphs). My favorite "drawing" is the figure of the loris (a primate), their behavior being described as "often hang suspended beneath branch of tree." The figured one is upright, above the branch, looking as if it is at the top of a giant swing on the high bar. For someone looking for a well illustrated and attractive volume, you won't find it here.

Rather distressing is the abundance of errors. The entry for "biting midge" is misspelled as *Ceratopongonidae* [sic] (pg. 49), as well as on pg. 72 as the entry word, but it is spelled correctly (Ceratopogonidae) in the figure legend and on pg. 319 (as the definition of "punky"). On pg. 83, the index word "Cicindelidae" [sic] is misspelled, but spelled correctly in the figure legend. On pages 295–296, the definitions of "pimpernel," "Pimelodidae," and "Pinaceae" are repeated twice. I have never known anyone who places the phlebotomine Psychodidae (biting moth flies) in their own family, but they are here (Phlebotamidae, pg. 290). In many instances, there is an inflation of the approximate numbers of species for orders, such as the Diptera with 150,000 (pg. 118), the Hymenoptera with 130,000 (pg. 189), and the Ditrysia Lepidoptera with 136,000 (pg. 118). In other instances, the authors rounded out the figures way too low: the family Drosophilidae, pg. 121 (small fruit flies), does not have 1,500 species, but just about 3,000; and there are more like 50,000, not 25,000, Noctuidae. The Ichneumonidae, as perhaps the largest family of insects (in competition with the Curculionidae) certainly has many more than 15,000 species.

There is a disproportionate coverage in the various subjects. There is an entry for most of the fish families of the world (not all of the approximately 550, but close!),

but only what I estimate as about one-quarter of the insect families. As it should be, the insect families or other higher taxa that are included are generally the larger families and/or ones with conspicuous members. It is understandable that, if all the insect families were to be included, the book would be about twice the size. But, for example, for the orders Mecoptera and the Trichoptera, there are no family entries. For the Hymenoptera, to my count, there are 19 family entries, all being among the most common or speciose taxa (but still missing the Tenthridinidae, Pteromalidae, Proctotrupidae, Tiphiidae, and Megachilidae). Why the discrepancy between insects and fishes? Why couldn't the common scorpion flies (family Panorpidae) be included if the Kyphosidae (30 spp. marine perciform fishes) and the like were included? I suspect it is because Boxshall specializes in crustacean fish parasites.

For someone unable to afford volume two of the Synopsis and Classification of Living Organisms (treating the insect families of the world), it might be better still to save the money otherwise spent on the Illustrated Dictionary towards investing in that volume.—*David Grimaldi, Department of Entomology, The American Museum of Natural History, New York, New York 10024.*

INSECTS IN AGRICULTURAL COMMUNITIES

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The Entomology of Indigenous and Naturalized Systems in Agriculture.—Marvin K. Harris and Charlie E. Rogers (eds.). 1988. Westview Press, Boulder, Colorado, 238 pp. $35 paper.

Recent years have seen an increase in agricultural research into the philosophy and methods of traditional systems of crop production, with the aim of applying the lessons learned towards putting modern, large-scale agriculture on a more environmentally sound and sustainable footing (for a recent exposition, see M. A. Altieri's *Agroecology: The Scientific Basis of Alternative Agriculture,* Boulder, CO: Westview Press; 1987). *The Entomology of Indigenous and Naturalized Systems in Agriculture* is a collection of articles on research that continues in this vein. The book stems from the first two meetings of the Annual Robert H. Nelson Symposium on Crop Protection Entomology, sponsored by the Entomological Society of America. As outlined in the preface, its purpose is to highlight some agriculturally important plants and their associated arthropod communities from a biological, as well as an agricultural, perspective. The authors' task was to integrate the two perspectives as much as possible by emphasizing how the wild progenitors and relatives of present-day crop plants interacted with arthropods prior to, as well as after, plant domestication, and to suggest how this knowledge might be used in solving pest and other problems in agriculture and biology. The book thus serves to bring together the two approaches, one basic, the other applied, into a more or less unified whole, furthering efforts to place the study of agricultural systems more firmly within a proper ecological and evolutionary framework. While much attention has long been focused on exotic pests in agriculture (e.g., C. L. Wilson and C. L. Graham, eds. *Exotic Plant Pests*